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Engineering Note

Date: August 4, 1998
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Project: CFT Axial Trigger Board
Doc. No: a980804a

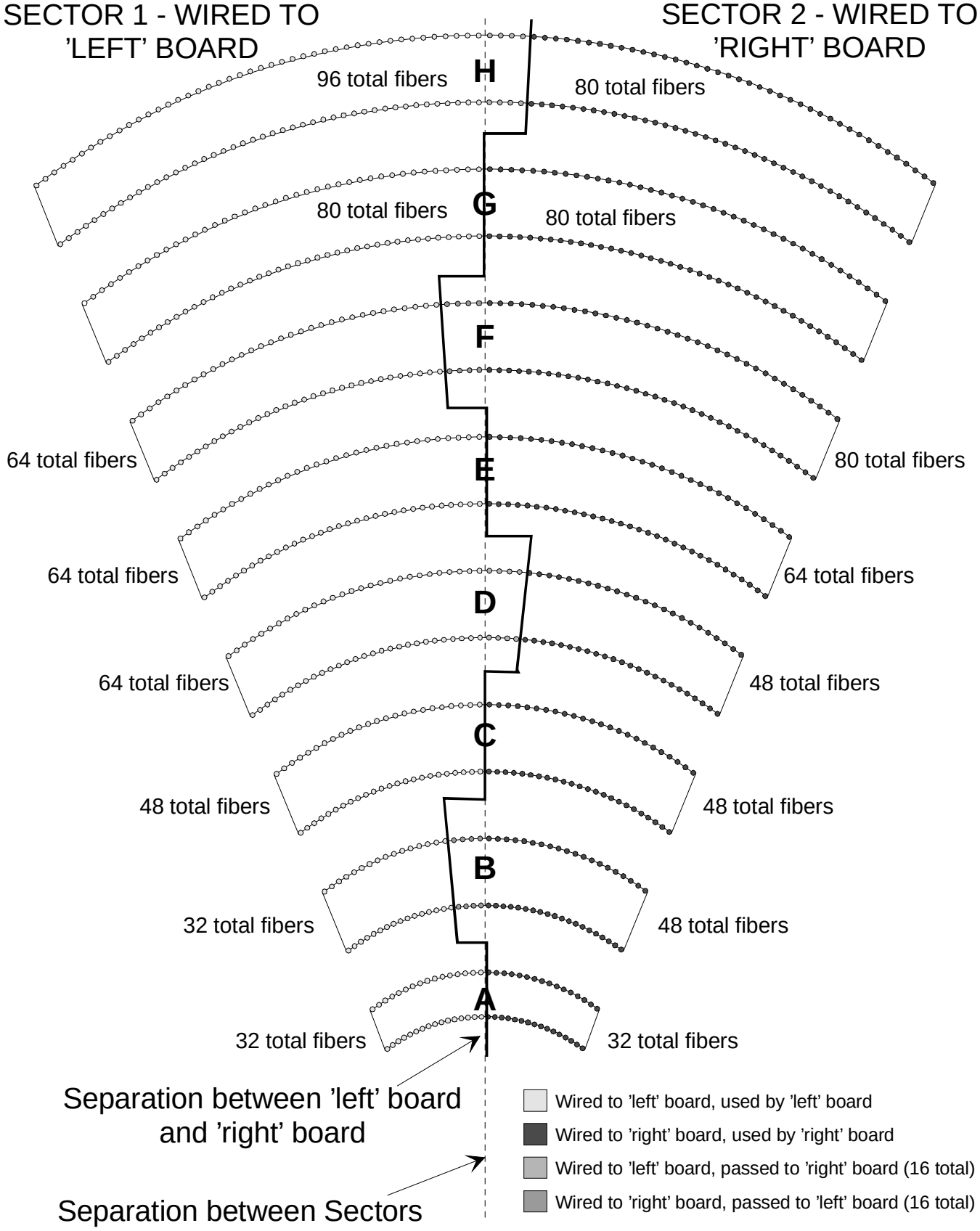
Subject: Fiber Distribution into CFT Axial Cards

The TDR leaves a little confusion about how the fibers map into the CFT Axial SIFT MCMs. The following drawing shows two sectors worth of fibers, and by color-coding shows how all 960 channels get wired to the boards. A total of sixteen discriminator channels need to be sent from the 'left' board of a pair to the 'right' board, and another sixteen have to be sent from the 'right' board to the 'left' board. This allows for full usage of the Synapse connectors as given in the TDR.

Note three things:

1. The equation $N = 16 * 4(L-1)$ given in the TDR is misleading. This is the number of fibers in a SINGLET layer, not the number of fibers in a DOUBLET layer.
2. The 512 fibers that enter a CFT Axial card are 480 CFT trigger fibers, and 32 CPS Preshower fibers. This drawing only considers the 480 trigger fibers.
3. The drawings in the TDR showing the number of fibers from each layer (A-H) entering the two CFT boards have an error. The left-side board has 48 fibers in the D layer, not 64 as shown.

Drawing on next page.


SECTOR 1 - WIRED TO 'LEFT' BOARD
SECTOR 2 - WIRED TO 'RIGHT' BOARD
H
96 total fibers
80 total fibers
G
80 total fibers
80 total fibers
F
64 total fibers
80 total fibers
E
64 total fibers
64 total fibers
D
64 total fibers
48 total fibers
C
48 total fibers
48 total fibers
B
32 total fibers
48 total fibers
A
32 total fibers
32 total fibers
Separation between 'left' board and 'right' board
Separation between Sectors
Wired to 'left' board, used by 'left' board
Wired to 'right' board, used by 'right' board
Wired to 'left' board, passed to 'right' board (16 total)
Wired to 'right' board, passed to 'left' board (16 total)